Could Resuspension of SARS-CoV-2 be a Significant Pathway of Exposure?

ISIAQ Webinar Series: Spread of Infectious Diseases in Indoor Environments Tuesday, June 2 @ 1pm UTC

Andrea Ferro, Clarkson University, New York, USA Jordan Peccia, Yale University, Connecticut, USA

Short summary:

Particle resuspension could be a significant exposure pathway for the SARS-CoV-2 virus. Resuspension has already proven to be important for exposure to other bioaerosols in occupied indoor environments. In addition, early findings during the COVID-19 pandemic indicate that the virus is prevalent in areas with high human activity and low ventilation, such as changing rooms in hospitals. Using existing resuspension models, current estimates for the virus loading and size distribution of human expiratory emissions, and viability of the virus in aerosols and on surfaces, we can roughly estimate the exposure risk from resuspended versus directly emitted aerosols. This webinar will examine resuspension as a potential exposure pathway and identify areas that require more attention to better characterize this source.

Bios:



Andrea Ferro is a professor of civil and environmental engineering at Clarkson University, the associate director for research for the Clarkson Institute for a Sustainable Environment, and the current president of the American Association for Aerosol Research. Her work focuses on human exposure to airborne pollutants, and she has published extensively in the area of particle resuspension from human activity. Ferro is a long-time member of ISIAQ, a member of the Indoor Air journal editorial board, and previously served on the ISIAQ board of directors.



Jordan Peccia is the Thomas E. Golden Jr. Professor of environmental engineering and the at Yale University. His research mixes genetics with engineering to study human exposure to bacteria, fungi and viruses in the indoor and outdoor environment. Peccia is a member of Connecticut Academy of Science and Engineering and associate editor for the journal Indoor Air.